



## REMARKS

Reconsideration and Allowance  
Respectfully Requested

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Claims 1-5 and 12-20 are currently pending. No claims have been added. No claims have been deleted. No new matter has been added.

I. CLAIMS 1, 2, 3 AND 12-20 ARE NOT OBVIOUS UNDER 35 U.S.C. § 103(a) BASED UPON THE DISCLOSURE OF AOTANI IN VIEW OF BRADY AND MACNEILL.

Claim 1 defines a cleat consisting entirely of plastic for an article of footwear. The cleat includes an insert and a plastic traction member. The insert and traction member constitute separate and distinct elements formed at distinct times in the manufacturing process. The insert is made from a synthetic plastic material. The insert includes a stem portion with engagement means for releasable engagement with a complementary formation defined on an undersole of the article of footwear.

The plastic traction member is secured to the insert during a molding process. With the exception of the engagement means, the traction member encases the insert holding the insert captive within the traction member. The insert is made entirely from a synthetic plastic material having a greater hardness than the traction member.

In establishing the law governing obviousness-type rejections, the Supreme Court in *Graham v John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy. . . This is not to say, however, that there will not be difficulties in applying the nonobviousness test. What is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context. The difficulties, however, are comparable to those encountered daily by the courts in such frames of reference as negligence and scienter, and should be amenable to a case-by-case development. We believe that strict observance of the requirements laid down here will result in that uniformity and definitiveness which Congress called for in the 1952 Act.

With the foregoing in mind, the U.S. Patent & Trademark Office has determined that a prima facie case of obviousness is established by meeting three basic criteria. First, the Examiner must show some suggestion or motivation to modify the reference or to combine reference teachings. Second, the Examiner must show a reasonable expectation of success in modifying the primary reference based upon the teachings of the prior art. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Support for the proposed modification and the reasonable expectation of success must be found in the prior art. MPEP 706.02(j).

The Examiner has rejected the claims based upon the disclosure of Aotani in view of Brady and MacNeill. The Examiner contends that it would be obvious to replace the rubber of Aotani with the spike encasing rubber taught by Brady and then replace the spike encasing rubber taught by Brady with the soft plastic taught by MacNeill. It is, however, Applicant's opinion that any modification of the rubber in Aotani or Brady based upon the disclosure of MacNeill would be inappropriate. As such, the outstanding rejection is considered to be improper.

First, Aotani fails to disclose a plastic traction member as claimed. Aotani does disclose a variety of spikes including a plastic insert and a screw portion. However, and as the Examiner has now acknowledged, Aotani does not disclose a plastic traction member as claimed in accordance with present invention.

The fact that Aotani fails to disclose the plastic traction member as claimed is highly significant. The differences between the utilization of plastic as claimed in accordance with the present invention and rubber as disclosed by Aotani is highly significant. When applied to footwear, rubber is traditionally used as a friction creating material which “sticks” to a surface upon which it contacts. In contrast, the plastic of the present invention is a relatively hard and durable material adapted for use in cleats such that the plastic digs into either grass, dirt or sand for providing a user with greater stability while performing a sport.

In an attempt to remedy this deficiency the Office Action states it would be obvious to encase the spike of Aotani in rubber based upon the disclosure of Brady. The Examiner then follows that it would have been obvious to replace the spike encasing rubber of Brady with soft plastic as disclosed by MacNeill. MacNeill and Aotani/Brady deal with very different materials and one would not look to the teachings of MacNeill for modifying the rubber disclosed by Aotani or Brady. To do so would change the very essence of the structure contemplated by both Aotani and Brady, which chooses to use rubber in an effort to take advantage of its very distinctive properties.

Brady, like Aotani, discloses a rubber traction member, albeit the traction member in Brady does encase the insert with the exception of the threads. However, the teachings of Brady do not remedy the deficiencies of Aotani as Brady also employs rubber for its specific material characteristics and makes no assertions which might be construed to support the replacement of rubber with soft

plastic as claimed in accordance with the present invention. That is, the newly relied upon teachings of Brady provide no further motivation for changing the rubber of Aotani to plastic.

In making the assertion that it would have been obvious to one of ordinary skill to replace the rubber disclosed by Aotani and Brady with soft plastic as disclosed by MacNeill, the Examiner has overlooked a significant aspect of the invention. The aspect of combining plastics together to give the cleat the hardness and flexibility to withstand the pressures exerted underfoot, and without melting while in the second molding step cannot merely be dismissed. Encasing one plastic in another to form a low cost cleat was not an easy and obvious task. It required years of testing various plastic to develop this invention and therefore is not obvious. In fact, the difficulty the inventor overcame in developing the present cleat is likely the reason the examiner has failed to find prior art disclosing or suggesting the claimed cleat.

Plastics and rubbers are generally considered to be mutually exclusive materials, and serve very different purposes within the manufacturing world. In fact, one test to determine if something is rubber or plastic is to stretch the material and see if it retakes its original shape. In order to mold rubber it must be vulcanized into a single giant molecule and cannot be remolded. This is how tires are made. Whereas plastics are generally formed of many short rigid molecules which become soft and pliable whenever heated and can be remolded many times. This is why plastic can be easily recycled and rubber cannot.

The importance of rubber's specific characteristics is in fact taught very well by Brady. The rubber traction member 32 in Brady is said to "deform and stretch to enable the peg 31 to penetrate the ground". Thus, to change the rubber in Brady, or for that matter the rubber of Aotani, which

the Examiner has argued would be obvious to modify based upon the disclosure of Brady, to a soft plastic would be contrary to the teachings of Brady, as soft plastics don't deform and stretch.

Although, MacNeill discloses that his traction member could be made from rubber or a soft plastic it does not naturally follow that any soft plastic could be substituted for rubber. One must look to the rationale for choosing specific materials. In MacNeill, unlike Brady and Applicant, the insert is not encased in one material. The center portion of MacNeill is not covered by its traction member, just like the center portion of Aotani is not covered by its traction member.

When applied to the base reference of Aotani as modified based upon the teaching of Brady, rubber and soft plastic do represent a simple one for one substitution as proposed by the Examiner. In fact, and as discussed above, Brady (and consequently the modified version of Aotani) requires the elastic characteristics offered by rubber to facilitate stretching of the rubber casing relative to the spike member. The replacement of the rubber of Aotani/Brady with soft plastic would, therefore, be entirely contrary to the teachings of Brady.

Ultimately, the Office Action, like all previous Office Actions fails to show or teach any reference wherein one plastic is encased in a second plastic during a molding process. These limitations are set forth in Applicant's claims and have yet to be addressed.

Further to the unobviousness of modifying Aotani with soft plastic as discussed above, MacNeill has been relied upon for its teaching of different hardnesses. Hardness is not generally a characteristic of rubber. With regard to the relative hardness of the materials disclosed by Aotani and MacNeill, the fact that it would be inappropriate to replace the rubber elastic members of Aotani with plastic as disclosed MacNeill renders it similarly inappropriate to replace the rubber elastic members of Aotani with plastic softer than the disk shaped portion of the spikes disclosed by Aotani.

One does not merely substitute rubber for plastic as discussed above. Rubber is a thermoset, whereas plastics are general thermoplastic. Rubber once set retains its elasticity whereas plastic loses its elasticity. The word plastic comes from the Greek "plastikos," meaning "moldable." Most polymer plastics are formed through the application of heat and pressure. The thermoplastic polymers disclosed by the inventor in the specification can be reheated and reshaped whereas, thermosetting polymers, such as rubber, retain their shape even at relatively high temperatures and cannot be reformed.

We call plastics *plastic* because they are pliable, that is, they can be shaped and molded easily.

Some nuances and details of what makes a plastic a plastic might be useful to go over. For example, why do we call a material a plastic and not a rubber, or elastomer? The answer is in the bouncing. You can stretch an elastomer, and it bounces back. Plastics tend to either deform permanently, or just plain break, when you stretch them too hard. Although plastics don't behave as well as rubber when they're stretched, it takes a lot more energy to stretch them in the first place. In other words "plastics resist deformation better than elastomers do". This is good when we don't want our material to stretch and the inventor does not want his materials to stretch. It takes more energy to stretch the plastic, making it resistant to deformation. But at the same time, if you pull hard enough, you cannot only stretch a plastic, but it will stay in the shape you stretched it into once you stop stretching it. Elastomers bounce back when you let go.

With regard to hard and soft plastic, soft plastic is not rubber. The plastic keys on your keyboard are hard, while the plastic around the cables of the same computer is soft. This is because all plastics have a certain temperature above which they are soft and pliable, and below which they are hard and brittle. This is called the glass transition temperature, or  $T_g$ . The  $T_g$  is different for each

plastic. At room temperature, some plastics are below their  $T_g$  and so they are hard. Other plastics are above their  $T_g$  at room temperature, and these plastics are soft. A soft plastic is pliable, not elastic. Rubber is elastic.

The Examiner has failed to show some suggestion or motivation to modify the reference or to combine reference teachings; the plastic disclosed by MacNeill offers properties very different from those contemplated by Aotani and/ or Brady and one skilled in the art would certainly not look to replace rubber with plastic when rubber has been chosen based upon its deforming and stretching characteristics. Second, the Examiner has failed to show a reasonable expectation of success in modifying the primary reference based upon the teachings of the prior art; in fact, modification of Aotani and/or Brady as proposed by the Examiner would be contrary to the intent of Aotani and/or Brady and likely destroy the product intended by Aotani and/or Brady in view of the fact that rubber and plastic are very different and offer very different material characteristics.

As to claims 12 and 15, they include limitations substantially similar to those defined in claim 1 and are believed to overcome the prior art of record for the reasons presented above with regard to independent claim 1. As such, Applicant respectfully requests that the rejection relating to claims 12 and 15 be withdrawn.

As to claims 2, 3, 13, 14 and 16-20, they are respectively dependent upon independent claims 1, 12 and 15, and are believed to overcome the prior art of record for the reasons presented above with regard to independent claim 1. As such, Applicant respectfully requests that the rejection relating to these dependent claims be withdrawn.

**II. CLAIM 4 IS NOT OBVIOUS UNDER 35 U.S.C. § 103(a) BASED UPON THE DISCLOSURE OF AOTANI IN VIEW OF BRADY AND MACNEILL.**

Claim 4 is dependent upon claims 1 and 2 and further defines a cleat “wherein the insert includes a raised spike opposite the first end of the stem portion, the raised spike being aligned with the traction member spike to cooperate therewith and function as a visual wear indicator for the cleat”.

The “raised spike” disclosed in Aotani may not function as visual wear indicator as it is not encased within the traction member. The entire idea of the visual wear indicators in accordance with the disclosed invention is that the traction member will wear away revealing an underlying spike of a different color. As the “spikes” of Aotani are not covered by the traction member as required by the claims, it would be impossible for these members to function as visual wear indicators in accordance with the present claims. Even if encased as taught by Brady the raised spike would still not function as a wear indicator as the rubber is intended to stretch and deform not wear away as would a soft plastic.

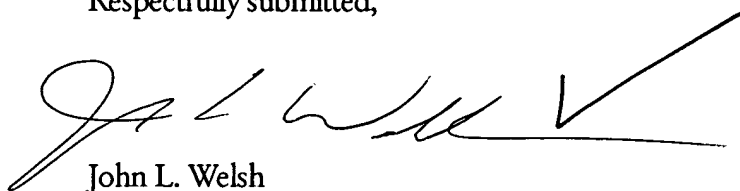
Aotani, therefore, fails to disclose the limitations required in accordance with claim 4. Similarly, nothing in the prior art discloses or suggests the modification of Aotani to include these limitations. In fact, the outstanding Office Action presents no rationale for overcoming this deficiency in the disclosure of Aotani. For the reasons presented above with regard to the limitations of claim 4, as well as the reasons present above with regard to claim 1, it is Applicant’s opinion that claim 4 overcomes the prior art of record and Applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) be reversed.



In view of the above remarks, it is Applicant's opinion that the prior art fails to show or teach the structure claimed. Therefore, it is respectfully requested that all of the outstanding rejections be withdrawn.

It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested. If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact Applicant's representative at the below number.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'John L. Welsh', with a long horizontal line extending to the right.

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